

IN THE CLAIMS:

- SAC*
- B/C*
1. (Currently Amended) A solid-state imaging element, comprising:
unit pixels, arranged in a matrix form, each of which have a photoelectric conversion
transfer element elements, a transfer switch switches for transferring charge charges stored in
said photoelectric conversion element transfer elements, a charge store part parts for storing
charges charge transferred by said transfer switch switches, a reset switch switches for
resetting said charge store part parts, and an amplifying element elements for outputting
signals a signal in accordance with the a potential of said charge in said charge store part
parts to vertical signal lines;
a vertical scanning circuit for selecting pixels in units of rows by controlling a reset
potential afforded applied to selected ones of said reset switches;
- a horizontal scanning circuit for sequentially selecting signals output to said vertical
signal lines ~~in units of columns~~; and
- an output circuit for outputting signals selected by said horizontal scanning circuit ~~via~~
~~horizontal signal lines~~.
2. (Currently Amended) A solid-state imaging element as claimed in claim 1,
wherein said vertical scanning circuit ~~affords~~ applies vertical selection pulses sequentially
output during vertical scanning to said reset switches as a reset potential thereof.

3. (Original) A solid-state imaging element as claimed in claim 1, wherein said charge store part is floating diffusion.

4. (Currently Amended) A solid-state imaging element as claimed in claim 1, wherein said reset switches ~~comprise a~~ are depression type transistors ~~transistor~~.

5. (Original) A solid-state imaging element as claimed in claim 1, wherein said output circuit outputs signals read into said vertical signal lines in voltage mode.

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6. (Original) A solid-state imaging element as claimed in claim 1, wherein said output circuit outputs signals read into said vertical signal lines in current mode.

7. (Currently Amended) A solid-state imaging element as claimed in claim 1, wherein said unit pixels include an overflow path between said photoelectric conversion transfer element and an area to which a pixel source voltage is applied afforded, said overflow path being used to discharge excess charges of said photoelectric conversion transfer element.

8. (Currently Amended) A solid-state imaging element as claimed in claim 1, wherein a negative potential is applied to the control electrode of each of said transfer switches.

9. (Previously Canceled)

10. (Previously Canceled)

11. (Previously Canceled)

12. (Currently Amended) A method for driving a solid-state imaging element which includes including unit pixels, arranged in a matrix form, each of which have a photoelectric conversion element transfer elements, a transfer switches switch for transferring charges charge stored in said photoelectric conversion element transfer elements, a charge store parts part for storing charges charge transferred by said transfer switch switches, a reset switch switches for resetting said charge store part parts, and an amplifying element elements for outputting signals a signal in accordance with the a potential of said charge store part parts to vertical signal lines, said method comprising the step of:

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selecting pixels in units of rows by controlling a reset potential applied afforded to selected ones of said reset switches.

13. (Original) A method for driving a solid-state imaging element as claimed in claim 12, further comprising the step of:

outputting signals read into said vertical signal lines in voltage mode.

14. (Original) A method for driving a solid-state imaging element as claimed in claim 12, further comprising the step of:

outputting signals read into said vertical signal lines in current mode.

15. (Currently Amended) A camera system using a solid-state imaging element as an imaging device, said solid-state imaging element, comprising:

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unit pixels, arranged in a matrix form, each of which have a photoelectric conversion element transfer elements, a transfer switch switches for transferring charges charge stored in said photoelectric conversion element transfer elements, a charge store part parts for storing charges charge transferred by said transfer switch switches, a reset switch switches for resetting said charge store part parts, and an amplifying element elements for outputting signals a signal in accordance with the a potential of said charge store part parts to vertical signal lines;

a vertical scanning circuit for selecting pixels in units of rows by controlling a reset potential afforded applied to selected reset switches said reset switch;

a horizontal scanning circuit for sequentially selecting signals output to said vertical signal lines in units of columns; and

an output circuit for outputting signals selected by said horizontal scanning circuit via horizontal signal lines.

Please add the following new claims:

16. (Newly Added) The solid-state imaging element of claim 1, wherein a falling edge of the reset pulse triggers reading of a reference level.

17. (Newly Added) The solid-state imaging element of claim 1, wherein a changing state of the reset pulse and a selection pulse initiates a pixel reading operation.
18. (Newly Added) The method of driving a solid-state imaging element of claim 12, further comprising triggering reading of a reference level with a falling edge of the reset pulse.
19. (Newly Added) The method of driving a solid-state imaging element of claim 12, wherein a changing state of the reset pulse and a selection pulse initiates a pixel reading operation.
20. (Newly Added) The camera system of claim 15, wherein a falling edge of the reset pulse triggers reading of a reference level.
21. (Newly Added) The camera system of claim 15, wherein a changing state of the reset pulse and a selection pulse initiates a pixel reading operation.